

Amendments to the Claims:

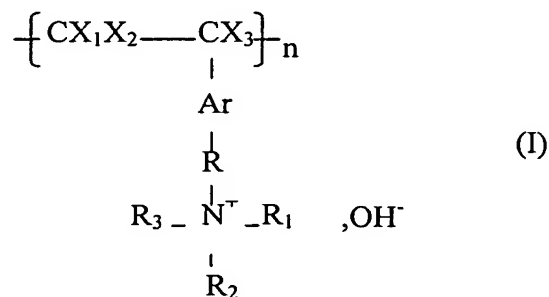
The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.-10. (Canceled)

11. (New) Alkali fuel cell comprising a solid stack consisting of a first electrode, a solid membrane conducting hydroxide ions and a second electrode, each electrode comprising an active layer that is in contact with the solid membrane, wherein the material forming the active layer of each electrode comprises at least an catalytic element, an electronic conductive element and an element conducting hydroxide ions, the element conducting hydroxide ions being a polymer having vinylaromatic units comprising a quaternary ammonium function and hydroxide counter-ions OH⁻ being associated with the quaternary ammonium functions of the polymer.

12. (New) Cell according to claim 11, wherein the element conducting hydroxide ions is a polymer having styrenic units comprising a quaternary ammonium function and hydroxide counter-ions OH⁻ are associated with the quaternary ammonium functions of the polymer.

13. (New) Cell according to claim 12, wherein the element conducting hydroxide ions is a polymer having the following general formula (I):



in which:

X_1 and X_2 are both selected from the group consisting of hydrogen, chlorine and fluorine,

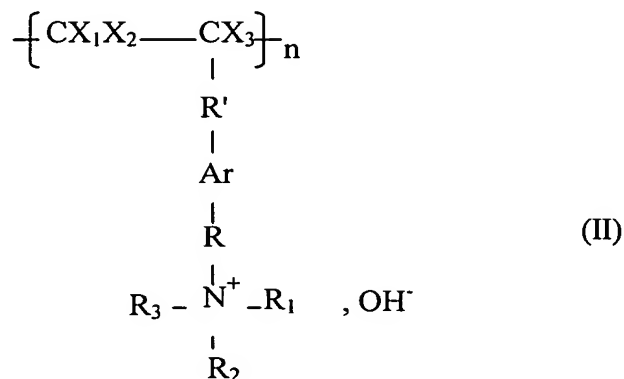
X_3 is selected from the group consisting of hydrogen, chlorine, fluorine, an alkyl and a perfluorinated alkyl,

Ar represents a possibly substituted, carbonated aromatic cycle,

R is selected from the group consisting of $-CH_2-$ and $-(CF_2)_{n1}-CH_2-$, with $n1$ comprised between 1 and 10, the $-CH_2-$ alkyl group of R being bonded by a simple covalent bond to the nitrogen of the quaternary ammonium function,

R_1 , R_2 and R_3 are respectively identical or different alkyl, aryl or alkyl-aryl groups, and n is an integer.

14. (New) Cell according to claim 12, wherein the element conducting hydroxide ions is a polymer having the following general formula (II):



in which:

X_1 and X_2 are both selected from the group consisting of hydrogen, chlorine and fluorine,

X₃ is selected from the group consisting of hydrogen, chlorine, fluorine, an alkyl and a perfluorinated alkyl,

Ar represents a possibly substituted, carbonated aromatic cycle,

R is selected from the group consisting of -CH₂- or -(CF₂)_{n1}-CH₂- with n1 comprised between 1 and 10, the -CH₂- alkyl group being bonded by a simple covalent bond to the nitrogen of the quaternary ammonium,

R' is selected from the group consisting of oxygen, the -O-CF₂ group, and -(CF₂)_{n2}- with n2 comprised between 1 and 10,

R₁, R₂ and R₃ are respectively identical or different alkyl, aryl or alkyl-aryl groups,

n is an integer.

15. (New) Cell according to claim 11, wherein the electronic conductive element is selected from the group consisting of carbon, nickel, silver, gold and platinum.

16. (New) Cell according to claim 11, wherein the catalytic element is selected from the group consisting of platinum and silver.

17. (New) Cell according to claim 11, wherein the catalytic element is formed by the electronic conductive element.

18. (New) Cell according to claim 11, wherein the electronic conductive element being the support of the catalytic element and of the element conducting hydroxide ions, it is in the form of a fabric, a foam, a powder or a grid.

19. (New) Cell according to claim 11, wherein the ionic conductivity of the solid membrane conducting hydroxide ions is greater than or equal to 0.005 S/cm.
20. (New) Cell according to claim 11, wherein each electrode comprises a diffusion layer so that the active layer is arranged between the diffusion layer and the solid membrane.